For Storefront For Art And Architecture

Thursday, March 2, 7-9pm: Dennis Oppenheim
Thursday, March 16, 7-9pm: Dennis Adams

April: Mary Beth Edelson

May: Mierle Laderman Ukeles

Dennis Oppenheim:

Focus on the contemporary situation, what art (and architecture) is doing taday.

Does studio art have an edge over public art? Is public art inherently limited in its scope, its access to higher perceptions and effects?

Let's look at the record. Why is public art not as good as studio art?

Where is public art in the field of ideas?

Is the egocentrism of avant-garde modernism a liability, or not? Is the democratic intent of postmodernism an illusion, a confusion of ends?

What are the root causes of public art's succumbing to compromise?

Dennis Adams:

Disguise and subversion in public art: appropriating the given conventions of the urban environment to subvert inherent power relations.

Taeg Nishimoto
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Hava

Spiritual: 1. of, or pertaining to, or consisting of spirit; incorporeal.

Spirit: 1. the principle of conscious life: the vital principal in man, animating the body or mediating between body and soul.

Random House Unabridged Dictionary. 1972

In 1910 Kandinsky declared the "great epoch of the spiritual...".

In 1914 Arthur Jerome Eddy wrote that,"It is only when new and strange forms are used because they are necessary to express a spiritual content that the result is a living work of art."

Yet the use of the word spiritual was verboten in the late 30's and 40's, and according to Richard Pousette-Dart was " near-heresy and dangerous to an artist's career."

Enter Alfred Barr, Clement Greenberg and Harold Rosenberg and an emphasis on formalist criticism...art for art's sake...with its resultant pattern of taste which still surrounds us.

Since public sculpture partially escapes the "art as investment" gallery pattern, consider it as an arena within which, " The true artist heals the world by revealing mystic truths." ... from a spiral neon sculpture by Bruce Nauman: Window or Wall Sign, 1967.

Can we go beyond the acceptable and conventional to join Mondrian, Duchamp, Barnett Newman, Bueys, Irwin, Turrell, Maya Lin and the sculptors of the land: Heizer, Holt, Smithson and De Maria, to express our desire for spirituality through the arena of contemporary public sculpture?

Artists:

Eric Orr
Robert Irwin
Joseph Beuys
Marcel and Suzanne Duchamp
Tabu Dada goal: to express thru form and color the
 mystery and divinity of the universe
Mondrian
Marsden Hartley
Morris Graves
Arthur Dave
Dorthea Rochburne
Maya Lin
Dan Burgy
Bruce Nauman
 "The true artist helps the world by revealing

mystic truths" Wittgenstein, "Window or Wall Sign" neon spiral wall sculpture 1889-1963

"The Wall", Rizolli book

"I had designed the memorial for a seminar on funerary architecture...We had already been questioning what a war memorial is, its purpose, its responsibility...I felt a memorial should be honest about the reality of war and be for the people who gave their lives...I didn't want a static object that people would just look at, but something they could relate to as a journey, or passage that would bring each to his own conclusions...I had an impulse to cut open the earth...an initial violence that in time would heal...It was as if the black-brown earth were polished and made into an interface between the sunny world and the quiet dark world beyond, that we can't enter...The names would become the memorial. Ther was no need to embellish."

Maya Lin was 21 in 1981 when she submitted the design, an architecture student at Yale.

"The Spiritual in Abstract Art", LACMA

p.11 Kandinsky,1910 "great epoch of spiritual..."
p.14 Sixten Ring, born in 1966 demonstrated that abstract art emerged as an attempt to express ideas about the ineffable.
p.17 1914 Arthur Jerome quoted by Maurice Tuchman "It is only when new and strange forms are used because they are necessary to experience a spiritual content that the result is a living work of art."
p.18 To use the word spiritual in the late 1930's-194o's, as Richard Pousette-Dart recently acknowledged, was near "heresy and dangerous to artists' careers"

Alfred Barr, Clement Greenberg, Harold Rosenberg possibility of atheism II art for art's sake
p.19 mysticism as the search for the state of oneness with ultimate reality. (and common ideas of mysticism listed)

Tuchman: Mystical and occult as having direct access to source.
p32 five impulses within spiritual/abstract nexus:
  cosmic imagery, vibration, synesthesia, duality, sacred geometry
p.32 "The Painter of Modern Life" and other essays, Charles Baudelaire spoke of: contemplation

of something infinitely great and infinitely beautiful, an intensity of light, a sensation of space reaching to its furthest limits.

Richard Wagner's advocated "total work of art"

variables of religious experience
p.34 William James: our normal waking conciousness, rational conciousness as we call it is best one type of conciousness, whilst all about it, parted from it by the filmiest of screen, there live potential forms of conciousness entirely different."
p.35 Kandinsky quoted about artists' responsibility (1st column) form "on the spiritual in art" 1912 perhaps the most influential doctrine by an artist in the twentieth century.

John Sellarad Spiritual is: doing something beyond itself!
p.35 ;Theosophy, vibration is formative agent behind all material shapes. The soul is set into vibration by nature, words, musical tones and colors. Vibrating brilliant the attainment of knowlege.
p.36 Mondrian: Harmonious unity of opposites: male-female, dark-light, mind-matter
p.37Malevich as representing the body moving into the 4th dimension
p.37 Cubist considerable interest in the 4th dimension
p.47 Duchamp translated Kandinsky's on the "Spiritual in art" from German to French in 1912

In the 30's artists were interested in streamlining and becoming "art workers"
p.49 In 1945 an exhibition on the spirituality of art of 200 paintings by Kandinsky and the reissue of "Spirituality in art" ran with abstract expressionists interest in Native American culture, Zen and Jung's concepts of archetypal form.
p.49 40's quote from Barnett Newman speaking for Gottlieb, Rothko, and Pollack: re: funeral art as decorative also re: his concern with "penetration into the world mystery...attempts to dig into metaphysical secrets...concerns with the sublime...areligious art which through symbols will catch the basic truth of life."

"Abstract art is not something to love for itself, but is a language to be used to project important visual ideas."
p.50 Brian O'Dougherty's reference to 2 summarizing concepts, 1st of the 19th cent. then of the 40's and 50's the quest- the search for transcendence

and the void.
Zen quality of ad Reinhardt's paintings.
60's Cage, Cunningham, Irwin interest in Zen
-Bruce Marden uses alchemical and numeralogical occult systems
-80's Keiffer
Irwin/Turrell interest in synesthesiaas a result of LA county MA's art and technology program at Jet propulision Lab.

p.312
Bruce Nauman Spiral Neon (1969) "The true artist heals the world by revealing mystic truths."
p.314 "Most significant abstract art today reflects an inner conflict between the socially encouraged will to conventional communication and the personal will to spiritual experience."
(Public sculpture as escaping the reinvertable/material pattern of painting)
p.314 Kuspit "Total abstraction = complete silence about the world and total realism
(alchemical transportation of the worldly object)-demonstrates unity of material and immaterial..p.315
p.315 Kuspit "In alchemical abstraction formal contrast is read as metaphysical unity and every pictorial element becomes sublimminally symbolic"
p.319 work that is " fuctionally mystical- that is it is not the vehicle of communication of religious dogma, but of a certain kind of irreducible, nondiscoursive experience.
p.320 important of achievement of integration out of which a sense of identity or self emerges. That viewing experience comes from a complex physical integration of the material of the work and the symbol as well as of the symbol and its exemplification.
p.324 Bueys- work of art as energy center
p.320 creating an experience of unity out of disparate sources.

Mierle Ukeles

-190 people wiped off the worst names sanitation workers had been called from 75' of windows at Ron Feldman Gallery
-She also shook his hand when she heard one san man say that she had wiped out 17 years of negative energy
-her work is considered,"hard to believe"
-overlay between natural flow of river and cleansing of the city
-Hudson river as a natural cleansing of the city

Catherine KElinski and Vlaska Volcano
"Temperance Fountain"
Tompkins Square Park
-Performance and installations to reenergize community interest in project
-Parks gave $60,000.00 to restore fountain
-wants to take it to level of becoming a sacred local site
"cultural activist"

Betsy Darmon

"only one river"
-wants to get into-ecological educational
-how special the earth is as a continuom
-blind beggar women remind people how special they are

Charles Ross

"Plaza of Americas"
Downtown/Dallas 17 story hign atrium
-36 prisms
-V.P. of developement Co.
-got out of car and got into glass elevator
-in violet atmosphere he had a transformative vision and heard a voice
-50' spectra
-colors became very personal
-personal and human/universal connections
-personal alignment with universe
-polaris' orbit increases 1 degree every 72 years

"Has Modernism Failed"
Suzi Gablik 1984

p.16 The emergence of modern art during the early decades of this century resulted from the coalescence of certain component ideas that form the basic structure of modern society: secularism, individualism, bureaucracy and pluralism.'

"By secularism , I mean the despivitualization of the world, the modernist refusal of the sacred. It refers to that rationalizing process, tributary to the development of science and technology, through which the numinous, the mystic, and the sacramental have been, in our society, reduced to rags; and the gradual triumph, under advanced "late" capitalism, of a bureaucratic, managerial type of culture characterized by mans consumption and economic self-seeking."

p.17 "To the postmodernist mind, everything is empty at the center."

p.18 "ideals it is legitimate to seek"

p.19 "we remain unconscious of the fundamental focus which shapes our lives."

Rothko- "You might as well get one thing straight, I'm not an abstractionist...I'm not interested in the relationship of color or form or anything else. I'm interested in expressing basic human emotions...and the fact is that alot of people break down and cry when confronted with my pictures shown...they are having the same religious experience I had when painting them."

STOREFRONT
ART & ARCHITECTURE

EVENING DISCUSSION NO. 1. @ 8:00PM
CONTEMPORARY ISSUES IN ARCHITECTURE
MODERATOR: NEIL M. DENARI

This 2nd in a new series of evening discussions at STOREFRONT centers around the question of communication in Architecture. More specifically, what are the techniques by which we as architects and/or writers convey information, to the public and ourselves, about the work at hand?

This question, of course, is persistant across time and is little removed from our ever changing technological condition. I have been thinking that, in an age of mechanical reproduction, Architecture is possibly read as some sort of quasi-prototypical entity replicated ad-infinitum in a generic form known as "buildings." Because of this possibility, is it the responsibility of the architect to project more meaning or ledgibility into Architecture via media other than steel, masonry, or even drawings?

My hope is that the discussion will expose this major question via a subtle progression of topics; beginning with Architecture laid bare, then coated with technological apparatus, then with textual apparatus, and finally ending with the question of how this entity of Architecture may or may not carry with it a need to reflect the PRESENT CONDITION of our society.

Please refer to the questions to further understand the topic and the progression it should take. N.D.

Referential quotes from other sources:

"Thus information dissolves meaning and the social into a sort of nebulous state leading not at all to a surfeit of innovation but to the very contrary, to total entropy."-- Jean Baudrillard from *Implosion of Meaning in Media.*

Go ahead, fill their heads
Go ahead, fill their heads, with poison

David Byrne from *His Wife Refused*

"The fact remains, however, that any possibility of *external* elaboration of intellectual work is precluded."-- Manfredo Tafuri from *Architecture and Utopia.*

"And the major question becomes, how is one to distinguish today between a responsiveness towards history and a regurgitation of meaningless references, or, more specifically, between Barthes' concept of repetition differente and mere empty repetition?"-- Ken Frampton from ARTFORUM, Mar 1981.

QUESTIONS:

1. At this point, is Architecture (heading toward) a failure as a medium or capacitor capable of delivering information or a message to the public? (In the face of a de-sensitized environment).

2. Should architects attempt to employ the apparatus of mass communications procedures into their buildings? If so, does Architecture then have to operate, for fear of perishing as a communicative art, as state-of-the-art gear?

3. What is the value of written text as an information supplement as opposed to or along with the usage of direct electronic mass mediums?

4. What generates the necessity for written text by an architect other than the desire to further describe that which cannot be read in the building itself?

5. Depending on the potentcy of the text, will the critics and the public rely too much on the text as a communicator, thus leaving the building more impotent?

6. Does the electromagnetic wave, in today's society, as an invisible mechanism, symbolize or become a referent for a loss of form (3D) in the world?

7. What kinds of "information" should Architecture transmit or detonate?

8. M. Heidegger has found that the very heart of all technological endeavors relates to the domination of nature. Do you feel that we are unwittingly, being subjected to a world liable to control and manipulation?

9. What is the architects or Architecture's responsibility to reflect the present condition of society? Is it choice or inevitability?

MARY BETH EDELSON

110 Mercer, NYC, 10012, (212) 226-0832

4-5

STOREFRONT >continuum

patriarchal
mind/body

Is this

artist against
admin or
public?

? (How does the nature/culture debate which is framed around a ~~polorized dichotomy~~ that pits culture against nature, men against women, mind against body, e spiritual against non-spiritual, logic against intuition, etc. effect [our environment?: ~~I am thinking of our (ecological) environment in the broadest terms to include,~~ how we in the city relate to each other, how that effects the art that we make, and (even) the possibilities that occur to us. ?

? Suggested reading: "An Open Letter to Thomas McEvilley" by Mary Beth Edelson, April issue of "New Art Examiner." This article explores the nature/culture dichotomy in relationship to women's body art, breaking cultural taboos as well as the spiritual implications.
Nature, Culture and Gender, Carol MacCormack and Marilyn Strathern, Cambridge University PRess.
"Of Other Peoples: Beyond the 'Salvage' Paradigm" by James Clifford, Virginia Dominguez and Trinh T. Minh-Ha in Discussions in Contemporary Culture #1 Edited by Hal Foster, Bay PRess.

Is that really what we want now?

so constipated

MARY BETH EDELSON

How does the nature/culture debate, which pits culture against, etc, - lead to a false polarization and effect our environment.

S.Rutkin
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NYC10021

USA
22
Lightning Whelk

Kyong Park

STOREFRONT
Art and Architecture

97 Kenmare Street

New York,N.Y. 10012

January 25,1987

Kyong Park
Director
STOREFRONT - Art and Architecture
97 Kenmare Street
New York,N.Y. 10012

Outline of Proposal for evening event -
Contemporary Issues in Art and Architecture /1987

Dear Kyong:

Enclosed is my outline for my proposal titled" Architecture and Architects as Appendage to Power" which reflects the meeting at STOREFRONT on December 9,1986 and the discussion regarding program and outlines for proposals. My proposal to present a new vocabulary and language of structures is something thet I will separately develop and send very soon.

I intend to be at the January 28,1987 evening discussion with Stephen Korns as Moderator and will see you then."The Machine" review and discussion on January 21 was very interesting.

Best Regards,

Sy Rutkin

January 25,1987

PROPOSAL outline for evening event by Seymour Rutkin ,reflecting comments made at Dec.9,1986 meeting

·1·25

CONTEMPORARY ISSUES IN ART & ARCHITECTURE/ 1987
STOREFRONT Art and Architecture

" ARCHITECTURE and ARCHITECTS as APPENDAGE TO POWER "

1-Some History
* Renaissance -appendage to religious power
                    appendage to family power (Medici family)
* An elite club -members of power -U.S.Architectural Club 1850's
* AIA; for example, the separation of architect from builder/construction(for many years)in its rules,by stressing the possible corruptive influence of being the builder as well as architect rather than acknowledging the possible elitist attitude this separation represented.
* The elitist training: architects trained to feel they are the (colleagues of the) power.

2-The architect's clients
  The architect works for the powers in a society
* Who are the clients? Power in government; the state as welfare for military-industrial; institutional;developer;private client.
* The architect is not the power that builds usually.The architect is an appendage to the power who has the money to build.
* What does the power want? Symbols.

3-Status
* The exploitation of architect as worker in the political/economic system.
* Elite architect related to power.
  a-Media attention
  b-competition among architects.
  c-the "Star" status.

4-Work activity
  a-related to economic cycles.
  b-whose needs are built for - the user?
  c-architecture as Symbol-symbol of power (see Star status ,above).

5-Discussion
* The power symbol position of architecture.
* The appendage position of the architect.

SOME REFERENCES

"The Power Elite" by C.Wright Mills,Oxford U.Press 1956
"The New Industrial State" by J.K.Gailbraith,Houghton Mifflin 1967
"Friendly Fascism" by Bertram Gross,South End Press 1983

January 25,1987

PROPOSAL outline for evening event by Seymour Rutkin ,reflecting comments made at Dec.9,1986 meeting 1.26

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Kyong & Shirin:
let me know if you
need more information.
P.

STOREFRONT FOR ART AND ARCHITECTURE/
DISCUSSIONS ON PUBLIC ART

"Disruptive Potentials: Public Art, Public Life, and Criticism"
Moderated by: Patricia C. Phillips

On Monday, November 30 at 8:00 p.m. the Storefront for Art and Architecture will sponsor another discussion in its year-long series on public art. ~~This particular evening~~ ~~Th~~ The focus will be ~~will focus~~ on the relationsip of aesthetics and public life in the late 20th century in order to explore public art and criticism as instruments for cultural observation and adjustment.

① It is ironic that as interest in and production of public art has increased in the past fifteen years, there has been a concurrent decline in the quality and vitality of public life. The diminuation of a contemporary sense of "the public" is a largely unexamined loss and a cultural condition which public art can investigate. Public art is situated at the intersection of democratic ideas, aesthetic issues, and cultural aspirations. And it has its own history and contemporary circumstances which enrich its potential as a critical forum.

② The discussion ~~on the 30th~~ will address questions concerning the relationship of democratic ecumenicism and cultural excellence, of the tradition of "the public" in North American culture, of the intrinsic connectedness of public life and public art, and of art's reluctance to explore and fortify this relationship.

This is an ~~Storefront's public art discussions~~ ~~are~~ open forum~~s~~ where participants are encouraged to raise questions and bring their own observations. ~~on the general topic and the particular theme of each evening.~~

~~STOREFRONT/97 Kenmare Street, NYC 10012/(212)431-5795~~

Patricia Phillips.

FEB 08 1988

Richard Haas. Discussion "Monument".

Monument: commonly ~~comm~~ honor events & figures of history
Monuments acts communalizer.

1840-80: tremendous interest to escavate Roman.

" ~~is sp~~
monument is permanent not temporary."
Question is there anything really permanent under the shadow of ~~atomic~~ nuclear mushroom, does the permanency of object guarantees monumentality?
What about symbolism ~~and the~~ permanency through society even if the work embodying its the symbol could just be a wood block print on paper.

homeless as a living and human monument vs. Grand Army plaza or other conventional monuments is ~~about anything~~ just a myth not real.

Cynthia Carlson: Guest Participants.

Cemetary monument.

STOREFRONT
Art and Architecture
Kyong Park/Glenn Weiss ~~51 Prince~~, New York, NY 10012 212-431-5795
New Address: 87 Kenmare Street, New York, NY 10012

Public art is frequently discussed and written about, but this activity has not led to an enhanced understanding of many pertinent issues. Non-commemorative and non-representational public art is generally accepted but the meaning of contemporary public art remains obscured in confusion. Two recent controversies in New York (the destruction of Adam Purple's "Garden of Eden" and the undetermined destiny of Richard Serra's "Tilted Arc") demonstrate just a few of the issues concerning the production, promotion, protection and public response to public art. Perhaps the most urgent and undocumented area is the relationship of public perception and acceptance of public art. In other words, what does the public desire (and can this be determined) and what does the public (or panels) reject (and why?)

Storefront for Art and Architecture is a not-for-profit exhibition and resource center dedicated to the investigation of the esthetic, social and political content of architecture and public art in contemporary cultures. In order to explore some of the esthetic and extra-artistic ideas about public art, Storefront is assembling a curatorial/advisory group to plan an exhibition of contentious public art which would include moved, removed and rejected public art, as well as realized projects that continue to evoke strong response. Through the selection of important examples and the documentation of each stormy history, it is Storefront's hope that this exhibition will focus unexamined issues concerning the selection of public art, the role and participation of the public, and the future of public art.

It is our hope that you will be able to participate in this curatorial/advisory capacity for this exhibition. While we know that the prospect of one more commitment may seem unthinkable for some of you, we promise to use your time and expertise effectively and expeditiously. We expect that this collaborative effort and the conversations shared will bear new insights for all of us and expanded consequences for public art. We will call you in the next two weeks to discuss the exhibition concept, to answer any questions you might have and (we hope) to welcome you as one of the guest curators for this project.

Kyong Park
Co-Director

Glenn Weiss
Co-Director

Patricia C. Phillips
Board Member

STOREFRONT
Art and Architecture
Kyong Park/Glenn Weiss 51 Prince, New York, NY 10012 212-431-5795
New Address: 87 Kenmare Street, New York, NY 10012

cc: Vito Acconci
Ted Castle
Jenny Holzer
Lucy Lippard
Deborah Ossoff
John Perreault

WEDNESDAY, MARCH 11, 1987, 8P.M.

A DISCUSSION AT THE STOREFRONT:

The interface between ARCHE' and TEKNE', or a libidinal theory of architecture.

Given the semantic premise that "Arche'" (Webster's) connotes a "first principle, something that was in the beginning, a primal element", and that "Tekne'" (Cacciari, Heidegger) implies "to make something appear; within what is present", it can be argued that architecture is a device mobilizing a prime element, DESIRE, at once meant as a Freudian libidinal longing as well as a by-product of an external stimulus, or generally, architecture perceived as a plateau where libidinal drives are made to appear. We can make such an assumption only today, after Freud and McLuhan, at a point in history when previous economies, technologies, ontologies, and proxemics are no longer sufficient to explain current modes of architectural fruition, or to explain 'space' where the act of dwelling has already deeply undergone a mutation and a reinterpretation. However, in order to verify such a claim, one has to overcome a falsely puritanical restraint in one's own judgment about human behaviour, and then begin to identify the double tracking guiding architectural fruition: on the one hand the recognition of people's subconscious drives, and on the other hand the 'denouement' of architectural manipulations which affect subliminally those same libidinal drives and even help to sharpen them.

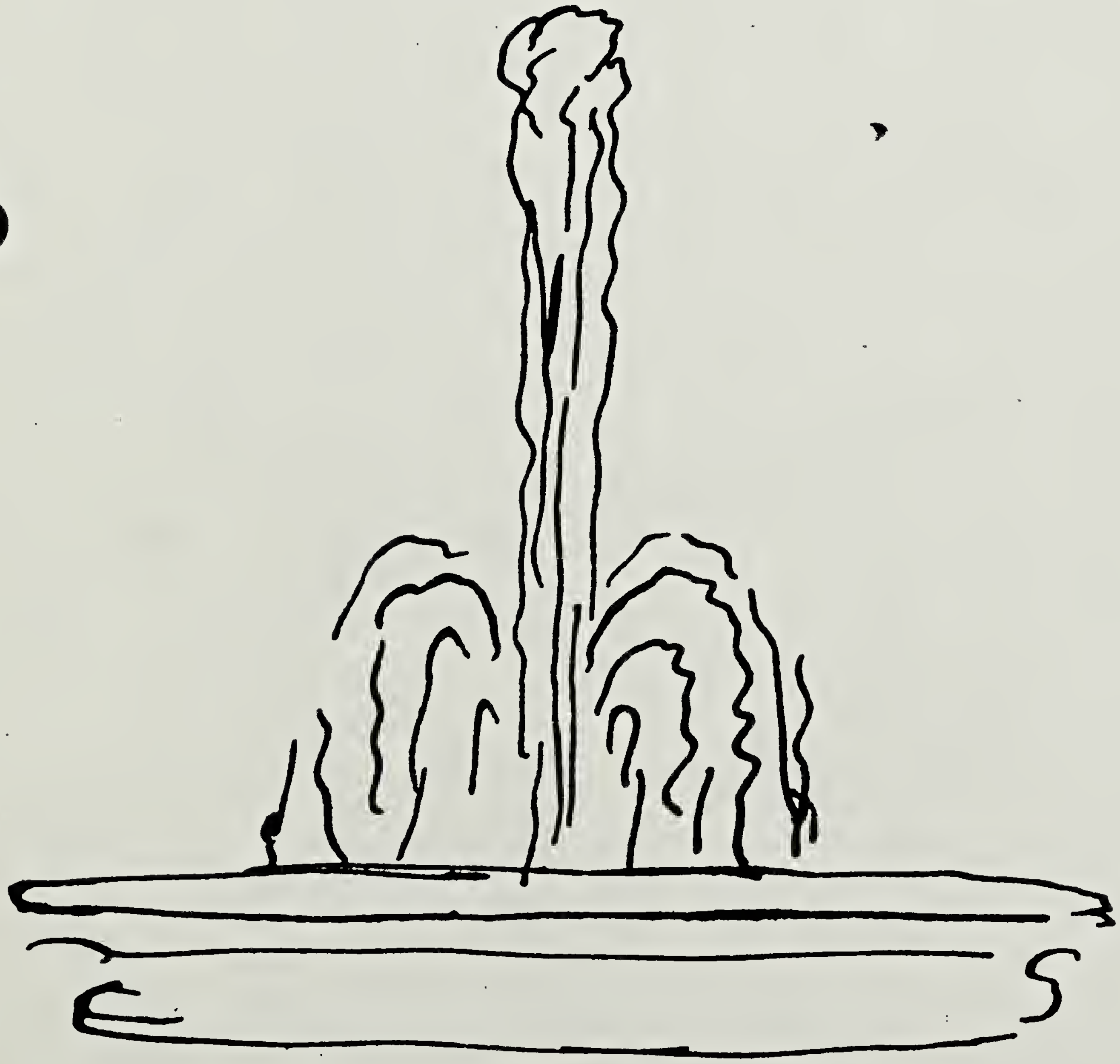
Amerigo Marras - 1986

©

a Libidinal Theory of Architecture

by

AMERIGO MARRAS



THE STOREFRONT FOR ART AND ARCHITECTURE 1987

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The history of architecture has always been the history of libidinal economies, which until now have been left implicit and mute, for there was no science capable of explaining them or even revealing them (like psychoanalysis or the critique of commodity aesthetics) or simply because puritanical prudishness has prevented an intelligent and even oblique study of the libidinal elements at the very base of architecture.

Our time is so far completely engulfed within the strategy of desire to such an extent that we can no longer retrace the way back to a naive state of unspoken libidinal fruition. Technology has provided the means for the implementation of subliminal manipulation of the libido by building appearances, simulation, and compression of experience. At the same time, architecture, like all products of this century, is shaped by commodity aesthetics, which, according to W.F. Haug, is based on an interplay between drives and manufactured stimulation that not only never reaches its saturation, but remains an appearance that "always promises more, much more, than it can ever deliver".

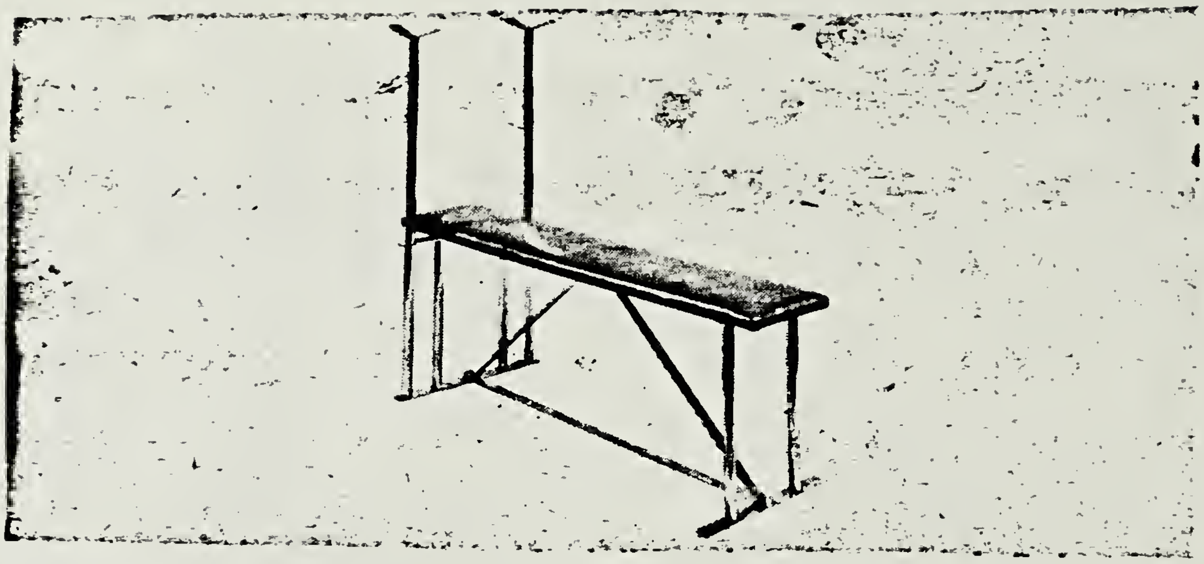
The appearance created by architecture in commodity aesthetics is thus an 'illusion', and as such it (the illusion) "ingratiates itself, promising satisfaction: it reads desires in one's eyes, and brings them to the surface of the commodity. While the illusion with which commodities present themselves to the gaze, gives people a sense of meaningfulness, it provides them with a language to interpret their existence and the world." (W.F. Haug)

The libidinal economy of consumer ethics wants to redesign not just all objects and all buildings, but also people, behaviour and even annihilation, and which totality is characteristic of our century. This totalitarian strategy is also possible because, as Lacan points out, the "reality of the unconscious", to which architecture speaks and commands, is always "sexual". The speech affecting our unconscious is a speech whose vocabulary is also tactile, gestaltic, spatial or mediated, but always deliverable through architecture, the total medium.

The current trend towards social atomization is an effect of libidinal economies which recompose social groups from older forms of associations to newer groupings whereby the libido plays a central role. Social failures and tactics are perceivable as falling into the cracks of the great interface between the strategy of desire and the atomized self asserting in a 'modern world' (since it would not mean anything at all in any other historical moment!): as the failure of achieving the promise given by the lure of the metropolis and by all that the metropolis entails in its delirium for libidinal sumulation and aggrandizing that requires the formation of victims to enhance its 'agon'.

If Venturi discovered Las Vegas, Las Vegas discovered libidinal strategies, and its form represents one of the first self-conscious manifestations of libidinal exhaltation, to which we can add the function of modern 'display', the commercial strip, window dressing strategies, Times Square, the aura of advertising, and most 20th century architectural radical proposals, which were in fact in their radicalness, redesigning a society and an architecture that pursued a redesign of a libidinally evolved species (R. Koolhaas).

More recently, we have to include the influence in the libidinal theory of architecture brought by women's emancipation in the socio-economic spheres as well as the libidinal autonomy proposed by the gay movements and the re-sexualization of the private space. Let us not forget that the language of the metropolis is a language of subliminal and overt libidinal messages, affecting not only the congestion of human proximity and the re-thinking of distance, but



even design elements like lighting or the sense of warmth (in its physical and psychological implications), and while it compresses vital space (existenzminimum), it deploys nuances of seduction, libidinal assertion and simulation, even false assertions (the trend towards the labelling of all dwellings as 'luxurious', for instance).

The problem lies not in the recognition of tremendous hidden forces at work manipulating our innermost desires and drives, nor in the centrality libidinal economy plays in our lives and in architecture, as I am proposing but in the often unfortunate and forceful play of unwanted libidinal roles, for one, having to play against our will a predominantly masochistic or voyeuristic role. To deny the centrality of libidinal economy in architecture is simply to state another side of libidinal stimulus: the sublimation of the libido.

A careful study of architectural archetypes (pre-Christian models, from the dolmen to Hadrian's Villa) will further support this theory, that rejects the limited vision of speaking of vague 'space' without its most human subconscious valuation when thinking architecture and its devices. History and the present tell us an intricate tale of libidinal strategies as applied in time and in form.

__+ CONTEMPORARY ISSUES IN ART & ARCHITECTURE / 1987 __+————I [

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ARCHITECTURE

EVENING DISCUSSION Nº 1 : January 21, 1987 / Wednesday @ 8:00PM

TOPIC: THE MACHINE. A review and discussion of the recent PS1 exhibition entitled BUILDING;MACHINES,COVERING the works of N. Denari, Pfau & Jones, and Kaplan Krueger/Scholz. Their views of the mechanicality of our culture will be presented vis a vis others working toward similar landscapes: Lebbeus Woods, TODT, Terry Lee Dill, Morphosis, England, etc. Industrial clothing and ear plugs may be necessary.

MODERATOR: Robert McCarter

EVENING DISCUSSION Nº 2 : February 12, 1987 / Thursday @ 8:00PM

TOPIC: TEXT[S] & COMMUNICATION IN ARCHITECTURE. See attachments for an amplification of the topics and questions for this evening's dialogue.

MODERATOR: Neil Denari

ART

EVENING DISCUSSION Nº 1 : January 28, 1987 / Wednesday @ 8:00PM

TOPIC: INSTALLATIONS, ARTISTS INITIATIVES, AND OTHER MEANS TO BETTER--THAN-AVERAGE WORK IN PUBLIC ART.

MODERATOR: Stephen Korns

Storefront welcomes topics and proposals for evening events. All considerations should be fairly specific and pointed. The Storefront staff will make decisions based on interest and relevance of topic.

STOREFRONT
Art and Architecture
97 Kenmare Street New York, NY 10012 212-431-5795

Proposal for a discussion at the STOREFRONT, Fall 1987

ZERO DEGREE OF DOMESTIC ARCHITECTURE

I propose a study of the crisis of the home in the urban environment (New York, for example) in the last decade of the 20th C.

The discussion is meant to be a tentative survey of the urban typology and its immanent shape and image of the home at the end of our Century, with consideration to the issues, the materials and the forces shaping our most private landscape.We want to begin grasping some understanding of the current and future lexicon that has entered the design process and is defining its crisis.

The inference made to apocalyptic aspects of our times (economic stagnation environmental threats, the shadow of current epidemics, etc.) is going to be considered alongside the other determining social factors shaping the making of private space. In architectural and urbanistic terms this translates as an increasing ghettoization, a shrinking usable private space, the uncertainty brought by the quality of materials, the vanishing home space, and the institutionalization and publicness of our lives, including some most intimate acts.

A zero degree of architecture, starting from an opposition to the suffocating reality of 'existenzminimum' of today, ironically forecasted by the Heroic Modern Movement,explores the plethora of Welfare Hotels, Aids Hospices, "Couch Homeless People", even the alternative International Building Exhibition in Berlin, and finally reproposes the emergence of the abandoned urban lot as the basis from which to rebuild our home.

The speakers to be invited ought to include progressive architects, politiclly active artists, social scientists and visionaries with concrete alternatives-to-Doomsday.

It is suggested also the parallel illustrative background exhibit, for a limited period of time or arranged in some highly visible locale, and that could include proposals for the reutilization of DEAD ARCHITECTURES AND URBAN SPACES, where the new proposals are placed on the typical examples of our decayed urban and social environment, including the industrial wasteland, the abandoned missile silos, the dead tech, the no man's land of empty lots.....

Amerigo Marras
New York, N.Y.
June 18, 1987

1.0: AGAINST EMPIRICISM

In science, the empiricist overtoned search for truth, evidence, hard-data, and certainty, have as philosophical oppositions, the prospects of UN-certainty, conceptual leakage, and intuitive intentionality; the latter being, in fact, a kind of phenomenological-proto-conjecture[1]. As long as scientists are "allowed" by their own discipline to ask questions of unbelievability, certitude is only partially claimed or produced by any/the act of investigation itself. Parallel to this speculation is a form of progress seen as external criticism - it is for others to judge. Verifiability in fact, may only occur within another discipline, thus making the field within which we make work as architects extend its edges beyond the finitude of architectural evidence to include not so much the procedures of scientists, but rather the questions that they may be asking. I hope to, in this paper, bring to light one or two of the more prominent and therefore persistently relevant questions that form entire fields in themselves. Further, through these questions or hypotheses, it will become clear that the subjectivity, or the formal/aesthetic pre-conceptions of scientists carry an a-priority towards an objective view of knowledge[2]. It is in this that we may ask what, in fact, is a LAW or a POSTULATE?

Just as classical science has continuously given way to modern propositions, thermodynamics being the first program to be developed out of the classical study of heat, so has the object of science, i.e. its truth, been exposed to the liberative actions of the subjective. These biases and distortions of not only science but the cults of humanism and the social bear the origin of knowledge itself; an intention or belief about a FACT[3].

We can point to the geometrical proof structure of IF, THEN as being based on Euclidean postulates. Take the presumed: two parallel lines shall never meet. Through properties of subjectivity, Riemannian (or Gaussian) Geometry states: two parallel lines shall meet at infinity This proposition, based on the Theory of Relativity that in space, straight lines do not exist, questions the Euclidean idea that a straight line between two points must be straight. We are wondering what straight-ness is. This is not so much a refutation of a pre-existing theory as it is a corresponding or affirmative theory of Relativity. However, all geometries concerning hyperbola and curvature are labled NON-EUCLIDEAN. So history tells us that it is not purely oppositional to Euclidean geometry, but rather presumes the ABSENCE of it. In other words, it is not UN-EUCLIDEAN geometry. This projection of absence identifies a modern construction of thought that has as its fundamental bias the need to rupture or start again. The history of science as a total empiricist ritual is thereby questioned.

More recently, it has been asked whether or not the Post-Newtonian second law of thermodynamics, commonly known as the entropy principle, (Statement: mass and energy contains a maximum and continuously developing level of disorder) is in fact a LAW, or is it merely a subjective view-point based on IGNORANCE[4]? That is, lack of knowledge translatable to the state of subjectivity, wherein entropy then becomes an "idea" that is analogous to a pure philosophical inquiry. The problem, you may see, is obvious. How entropy, which science has held as being statistical, as the measurement of randomness in a system, seems to be factual. An answer may be provided in the statement made by G. N. Lewis in 1930: " Gain in Entropy always means loss of information, and nothing more...it is a measure of the incompleteness of knowledge."[5] This definition, a precursor to later developments in information theory[6], is essentially a transpositon from the classical thermodynamic definition of entropy. Energy and its loss, once measured against a Carnot cycle or a steam engine, could now be equated as loss of information or the production of ignorance within a different system; in this case, the field of communications.

These transcriptions and pursuant re-definitions question the stability of a LAW or FACT by the act of suspending an original idea. Since comminications is measured against culture, as if culture could be flattened into a huge piece of graph paper, it is for me clear that the everyday world is the objective referent and that science is the realm of origin, the "place" where all phenomena are born. The circular structure of all things, here seen systematically as energy-to-communications-to-entropy-to-culture and back again, not only opposes the normative reading of a linear history, but also necessitates the making of a subjective positioning towards the origin of knowledge and its attendant in-completeness. Accordingly, Paul Feyerabend states that "We must choose a point outside the system or the language defended in order to be able to get an idea of what a criticism would look like. We must use an alternative."[7] I agree with the notion of Feyerabend's transition to a theortical pluralism as being equal to such an inter-disciplinary approach to solving philosophical propositions. That is, as architects, we should seek out the scientific question a priori to engaging in the usual modalities of architecture.

Let us assume then, a scenario in which a theory has been posited, has been verified, and thus has been confirmed. Out of experience, one may state that, "BUILDINGS CANNOT FLY." It is clear that gravity, the incontestable force, exists in order to hold (certain) things down. To release ourselves from the present logic of this statement, as a form of criticism, is to ask what IS a building, not what is gravity. However, to fall into and suffocate under a logic such as:

1. All airplanes are spatial
2. All buildings are spatial, therefore
3. All buildings are airplanes,

can only lead to a semantic argument based on a formal description. To assert that an object of certain spatial properties can or cannot fly will lead, therefore, to a technical description, most probably through aeronautical terminology (the science of flight). Further, if we reverse a given point of view and say, "BUILDINGS CAN FLY," we immediately see this as a negative discovery or as a demonstrative action of IMPOSSIBILITY[8].

Does the astonishing technical advancement in super-conductivity, the frictionless levitation of bodies, verify the new theory, and if so, how does this advancement coincide with the "philosophic" side of science? To bring up technical advancement here is to elaborate, by contrast, what this paper is concerned with.

Super-conductivity defeats gravity in the same way a solid propellant allows the space shuttle out of the earth's gravitational pull: through a particularly devised technical solution. One can say that these solutions successfully solved the problem of gravitation by overcoming nature's force. It seems as though Newtonian dynamics are not in question as universal laws, as fact. In Feyerabend's terms, this kind of discovery may be called "radical empiricism"[9], since the processual discontinuity of reversing an argument at first disrupts, but then coincides with the agreement of the factuality of gravity. Pitted against these technical advancements, is, for instance an Einsteinian proposition of the IMPOSSIBILITY of transmitting information and substance at a speed greater than light, a relative position of unobservable phenomena. Einstein's conclusion was that the impossibility of certain processes permits us to introduce a valid hypothesis, something that technical skill will not necessarily overcome.

The void between science and what, in contemporary terms, is called techno-science, is where ARCHITECTURE may exist; caught between sensational triumphs and the PHILOSOPHY OF IMPOSSIBILITY. For me, this paper attempts to ground a species of architecture in the scientific as a hope of rescuing it from a free-fall in the void described above.

2.0: LANGUAGE/DESCRIPTION

The ultimate cultural mandate of science, that is, to understand and describe nature and the physical world, applies itself equally to the position of architecture as a fundamental discipline. If, say, geometric figures like circles and squares may be completely described, given a language of description, then the same may not apply to physical objects or "real" phenomena of which, in a practical sense, a building must be. These entities defy complete description and are thus in-exhaustibly elusive. In the face of this complexity and leakage, architecture becomes a "model" of description[10], an object as a substitute for any idea which is inherently formless or invisible. Inasmuch as this may sound like a definition of metaphor, this proposition has as _its_ cultural mandate, the very destruction of metaphor and in its place, the construction of a scientifically legitimate description. Henri Poincare, at the turn of this century, wrote:

> We should like to represent to ourselves the external universe, and only by so doing could we feel that we understood it. We know we can never attain this representation: our weakness is too great. But at least we desire the ability to conceive an infinite intelligence...[11]

This is clearly an attempt to put all physical phenomena into one framework. Now, I am borrowing Poincare's study of the simultanaeity of time (re. Einstein) in order to reveal the intent to inscribe SCIENCE ONTO ARCHITECTURE and vice-versa; the collapse of one into the other. But as previously stated, the futility of this revealment persists, and pleasurably so.

There may ba a way out of this dilemma through language, since essentially it is the role of the scientist to create a language in order to enunciate a fact or supposition. However, to avoid a metaphysical language is not easy if we agree that scientific [and therefore architectural] discovery is indeed speculative and uncertain. Take mathematics for instance; through Heidegger we find that it is "about" things which we ALREADY KNOW[12]. In this, mathematics and its attendant language, i.e. number, serves physics as a utility of describing phenomena which, without number, could not be described. Here, mathematics grabs the ineffable concept and presents it as readable[13]. I do not however, wish to make merely an analagous structure of architecture to mathematics as a revealer of some other hidden or invisible system of phenomena such as entropy, gravity, or chaos. In fact, this is all too obvious, but in my own admission of ignorance, it is also more than a bit difficult to overcome.

Still, a question of obvious dialectical power asks how a theoretical pluralism can exist against or within what is essentially a reductionist mentality. Biological organisms, for instance, have been reduced to mechanisms, or explained in mechanistic terms. It is possible to view the motion of the living being as the thing that makes viable the use of "mechanism" as a model for description, or the substitute outside of a given system[14]. While biological motion may be described mechanically, however, the motion of the atmosphere is not as predictable. Since the developments of quantum mechanics and Heisenberg's uncertainty principle[15], a new model, but not a new language has been necessitated (for this atmospheric description).

I am sure it is for architecture to become a language of description that is not any different from mathematics, and by extention, from physics. It has been, since the time of Galileo, the hope of science to make only one language to globally describe all things. Accordingly then, through the monistic language, architecture could exist as a localized projection that may reveal a larger question.

NOTES

1. Refer to the phenomenological propositions of Edmund Husserl in: Phenomenology and the Crisis of Philosophy.

2. See Karl Popper's Objective Knowledge (Oxford Press, 1973), And Conjectures and Refutations (Harper & Row, 1963).

3. "Depending on one's interpretation of historical 'fact', this would reduce the historical account to some recording of 'brute facts', or to a fairy tale or a myth. Brute, uninterpreted facts being eliminated by their unavailability, this leaves us with history as some rhetorical, or evocative invention of the historian, or as ultimately ineffable existence to be lived through but not described." Marx W. Wartofsky, Conceptual Foundations of Scientific Thought (New York: The Macmillan Company, 1968), p.398.

4. K.G. Denbigh/J.S. Denbigh, Entropy in Relation to Incomplete Knowledge (Cambridge: Cambridge University Press, 1985), p. 3.

5. Ibid., p. 4.

6. Claude Shannon, MIT 1949, entropy principle in relation to communication and information systems.

7. Paul Feyerabend, "Problems of Empiricism", Beyond the Edge of Certainty, ed. Robert G. Coldony (Englewood Cliffs, N.J.: Prentice-Hall Inc., 1965), p. 151.

8. Ilya Prigogine/Isabelle Stengers, Order Out of Chaos (New York: Bantam Books, 1984), p. 299.

9. Feyerabend, p. 149.

10. Denbigh, p. 8.

11. Henri Poincare, The Value of Science (New York: Dover Publications, 1958), p. 31.

12. Martin Heidegger, "Modern Science, Metaphysics, and Mathematics", Basic Writings, ed. David Farrell Krell (New York: Harper & Row, 1975) p. 254.

13. Heidegger asserts that the premise of science employing mathematics essentially places mathematics as the "fundamental pre-supposition of the knowledge of things." p. 254.

14. I have intentionally not included in this paper my own subjective bias toward an understanding of the "mechanical model" as a referent from the language of mechanical physics, toward the premise of Architectural discourse.

15. See Heisenberg's Physics and Philosophy.

Discussion Program:
January 26, 1988.
Moderator: Kyong Park
Topic: Public Architecture and Private Developments

What could be called as Koch-nomic, New York City has revitalized itself from the bankruptcy of 1974 as once again the symbol of capitalism and its material satisfactions. No longer able to count on the financial help from the big daddy, Washington and its Reganomics, the city turn itself to the private investors. The city presented itself as a large parcel of real-estate, not a community, and opened itself to the highest bidders. Public lands and public funds were put on to commercial and private markets, where various private developers were given an open invitation to co-op our city under the name of progress. The most prominent examples are the Columbus Center and the Television City.

The price we pay for all this is the inclusive nature of city as a community made of public iinterests and public service. You should be alarmed by the acceleration of homeless population, as you may become one of them. For those individuals who do not believe in the contemporary ethic of greed are not immune to be denied of the human rights for home under the Darwinian principal of only the strong will be housed. The right of humanity to have a city or a community as a 'home' is also threatened under current interests to build and develop every square inches of land and every cubic centimeter of air spaces. Don't turn away from the living monuments of truth for our future, the homelesses. Their wretched exterior will show you what you are to encounter physically in the future. In the depth of their eyes you will see the imprisonment of your own spirits in the future. We should thank the homeless as the prophets of our future.

This discussion, as I hope all others in the Discussion Program of STOREFRONT are made of, is not to tell you how smart I can be. The purpose is to be together and to talk and understand various issues that are public in its nature. I hope that you will help me to further understand how we as an individuals can re-invent public interest for our city, and the community of architects should act.

To invite your ideas and experiences, I have prepared the following questions.
1. Who are the real owners of city properties? City government or the public?
2. Should the city government sell its property to commerical developers without community approval?
3. In the case of Columbus Center, was it proper for the city government to sell its property to the highest bidder with no guideline representing public and community interests?
4. The community board reaction and civic organization response,

such as the successful law suit by the Municipal Art Society, to the larger and unwanted urban development proves that the system itself can control private interest and sustain public interest?
5. Can you afford to live in New York City?
6. Is the city only for the rich?
7. Are we all here for the money and nothing else?
8. Litigations and legislations the only form of action to control over-development of the city?
9. Who are the real client of architects currently? The developers or the public?
10. What is the purpose of architecture? Materiality or Spirituality?
11. Which side should architects be on? the developers or the community?
12. Can architects make any differences?
13. Can architecture make any differences?

DESIGN AND TECHNOLOGY EDUCATION
A Program for Community-Based Learning

Michael J. Shannon
The Center for Design & Technology Education
February 9, 1991

Introduction.

Dysfunctional schools are a product of a dysfunctional society. The "failure" of U.S. education cannot be blamed on schools alone. As the socializing influence of family, church and state evaporates in our inner cities, schools are having to bear the whole burden of civilizing our children. Creating a civil society, however, requires the contribution of all of society's constituents.

Accordingly, design and technology education addresses the whole community. It engages the collective will of political and business leaders, school administrators and teachers, all families -- not just parents -- and above all, of students themselves. Whole community involvement serves to focus attention and resources on school problems, but even more importantly, it shows students the real meaning and relevance of education. Greater community interaction clearly demonstrates the relationship between educational achievement and quality of life. Students come to see education as an integral part of living, as a learning process for life everyday, not only for life in the future.

This paper explains how design and technology education builds on and reinforces the educational benefits of community involvement. In part I. "design" and "technology" are defined. In part II. design is discussed in terms of its inherent meanings for education. In part III. the use of design as a foundation for a community-based, design and technology learning program is described.

Most recent paper

I. Defining Design and Technology.

"Lo! Men have become the tools of their tools." Henry David Thoreau

This crisis of control of our lives, our civilization and our Earth defines the need for design and technology education. Edward Wenk, Jr. writes "There is a worrisome and discordant note in contemporary society between the tangible fruits of science and technology as the source of progress and their inadvertent role as a threat to life, liberty, and the pursuit of happiness." [1] We need to understand how and why science and technology, that were intended as tools for progress, now play major roles in directing it. To what extent do we control our future? To answer this question, we will need to know more about, and become more proficient at, the process that creates science and technology and that applies them in creating our world. This process is design.

Herbert A. Simon defines design as "devising courses of action aimed at changing existing situations into preferred ones."[2] Design in this light is seen as a general human capabilty, the process by which we improve our lot by changing what we find into what we want. Design is the process of progress -- how we project ourselves into the future. It is the fundamental creative activity with which we direct our lives, and collectively, the Earth's transformation from its original, natural state into our human-made world.

In the following discussion, I focus on design's inherent meanings for education, rather than on technology's. This is to stress that *the operative verb is design.* Design directs the creation and use of technology. But of paramount importance is that in designing we go beyond the classic technological question, *can* we do it?, to ask, *ought* we to do it? "The most important principle in the social management of technology is the exercise of moral vision." (Wenk, 1989 p.11) Design marries moral vision and action, the mind and the hand, giving us a uniquely powerful and relevant pedagogical model.

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1 Edwark Wenk, Jr., Tradeoffs, Imperatives of Choice in a High-Tech World, Johns Hopkins University Press, Baltimore, 1989, p.1, Introduction
2 Herbert A. Simon, The Sciences of the Artificial, (Cambridge: MIT Press, 1969, p. 129)

II. The Educational Meanings of Design.

"Ideas are for action." Aristotle

Our discussion begins with design's being a model for opportunity. The opportunity to design means that we are in charge of our lives and that we can change them. Design offers us an inherently forgiving and optimistic model for self-renewal. "If you don't succeed.... try, try again," could be a description of designing. And the design model presents this life-affirming opportunity not simply as abstract theory, but as a means for *concrete action*. Designing is a dynamic, engaging activity. Design's "can-do," forward-looking positivity attracts people, giving design its special power to educate.

Design's future-shaping capability is generated by individuals' creativity. Creativity is the expression of each person's unique perspective. Every person, therefore, has creative potential. In many cases, however, the expression of our individual creativity is suppressed. Conventional educational experience subverts creativity by rewarding prescribed behavior -- getting the "right," culturally acceptable answer. A basic principle of designing, on the other hand, is that there are no "right" or "wrong" answers, only more or less appropriate solutions. Designing, which is applied creativity, is thereby the application of our individual perspective. So practicing design doesn't just permit the expression of creativity -- *it demands it.*

Designing is true problem-solving. As a systematic process of analysis, synthesis and evaluation, and as a "whole brain" method involving all modes of cognition, it represents quintessential "higher order" thinking.

Further enhancing the quality of design decision process is its inherent ethical bias. Consider again Simon's definition, "devising courses of action aimed at changing existing situations into preferred ones." The salient words are "aimed" and "preferred." "Aimed" implies intent, which implies accountability. What we do on purpose, we should do with full consideration of the consequences. "Preferred " implies judgement, which implies values. Judgement should not be arbitrary. We see, then, that design has inherent ethical meaning. I don't know of another concept which so purely integrates purposeful action with ethical concern. In designing, people have to make value judgements and they see that these judgements affect the lives of others. Students' discovery of responsibility is at once sobering and exhilirating. It gives their perception of education a vitally new dimension.

We may design by ourselves, but because change affects other people, design is executed in complex, public circumstances. Design's implementation must be negotiated. Designing teaches us about compromise and assertion, when to follow and when to lead, how to communicate and how to listen. Designing is ultimately a social process that relies on teamwork for its effectiveness.

Of particular educational value is that design projects are cross-disciplinary, linking subjects in ways that reveal new patterns of meaning. Designing shows how "boring" subjects combine in real life to produce, among many other things, exciting products such as the food, clothes and music that kids crave. Designing breaks through the artificial boundaries of academic specialization giving schoolwork meaning, vitality and relevance.

Another example of design's contribution to curricular integration is in bridging the gulf between the arts and sciences. Design -- applied art, and technology -- applied science, are inextricably linked in the creation of things. Designs must be produced technologically, while technology must be designed. Neither design nor technology exists alone. Through repeated and always unsuccessful attempts to find "perfect" design solutions, we come to understand our elemental relationship to art and science. They are complementary efforts -- affective and rational -- at perfect design, at knowing the unknowable. Albert Einstein said: "The most profound emotion one can experience is the sensation of the mystical. It is the source of all true science." Could not the same be said of art?

George Nelson, the late designer and educator, referred to our culture's deficient right brain function as "visual illiteracy." I think Nelson was making a point akin to Rudolph Arnheim's concept in his book *Visual Thinking.* [1] Arnheim's view is that vision is not simply a process with which we collect data for later mental processing, but that because the eyes are extensions of the brain, seeing *is* thinking. He cites Aristotle's statement that "the soul never thinks without an image." The ability to image, *to imagine* , is the basis for modeling in the mind, being able to represent ideas pictorially, symbolically, metaphorically. Visually-based abstraction is essential for higher order thinking.

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1 Rudolph Arnheim, Visual Thinking, University of California, Los Angeles, 1969

A major source of design's pedagogical capability is that its integrated, mind-into-matter process is learned not through study and contemplation -- but *by doing.* Design is a dynamic process. The value of experiential learning has long been recognized. Recall the Chinese proverb: "I hear and I forget, I see and I remember, I do and I understand." This thinking prefigures "constructivism." Constructivism theory, based on the writings of the psychologist Jean Piaget, holds that knowledge is built by the learner, not supplied by the teacher, and that children think and learn best when they are constructing something. *Ideas must be linked to experience to create understanding.* Designing in this light, as Donald Schon says, is "reflection-in-action,"[1], learning-by-doing.

Additionally, I think that the fact that *design is a process* is itself educational. So much of life's work is goal-dominated. We do, of course, design for results. It is important to understand, however, that the lesson of designing is not only the product, *but is the whole process of creation.* It is by bringing things out of ourselves that we learn to bring ourselves out, that is, to create ourselves. Designing is self-birthing with all the term signifies.

* * *

We have identified ten educational meanings of design. They are:

1. **Designing represents opportunity.** It provides a positive model for change that motivates people to renew their lives.

2. **Designing evokes creativity.** It calls forth those special attributes that define each practitioner's unique creative capacity. Genuine self-esteem does not derive from being like everyone, but from being respected by everyone *for being oneself.*

3. **Designing is problem-solving.** It brings the "whole brain" to the process of analysis, synthesis and evaluation generating highest quality reasoning and critical thinking.

4. **Designing is ethically biased.** Inherent to design process is making value judgements and being accountable for those decisions.

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[1] Donald Schon, The Reflective Practitioner, How Professionals Think in Action, p.162, Basic Books, N. Y., 1983

5. **Designing promotes teamwork.** Designing is a social process -- self/group expression. Student designers learn negotiation, communication and leadership skills needed to become their own creative and effective selves.

6. **Designing is cross-disciplinary.** It integrates all areas of knowledge and experience. Design's relating subjects to each other and to the "real world" gives school excitement and relevance, countering the dispiriting effects of academic fragmentation.

7. **Designing bridges the arts and sciences.** The designer sees art and science in terms of design and technology. The mutuality of design and technology -- of idea and realization -- illuminates for the designer the complementary relationship of art and science.

8. **Designing is based on visual perception.** This is visual thinking. Rudolph Arnheim points out that vision and imaging are integral functions of general cognition. Learning to see critically, therefore, is learning to think critically.

9. **Designing is learning-by-doing.** It is a hands-on, working process. Designing links ideas to experience in order to create understanding.

10. **Designing is a process, not a goal.** A benefit of creating anything is that it contributes to self-creation. Designing calls forth our innermost self and commits us, through the process of creation, to the world. We become what we do.

III. Using Design's Meanings For Education.

"It takes the whole village to raise a child." African proverb

Design and technology education had its beginnings in the U.K. thirty years ago. Today, ten percent of the British National Curriculum for students aged five to sixteen is dedicated to this approach. This development obviously lends substantial credibility to the concept. A U.S. version of design and technology education is being developed for grades K-12 by The Center for Design &Technology Education. [1] The Center, established in 1991, will research, design and evaluate curricula, teaching materials and teacher-training programs. The Center will serve nationally as a source of design and technology education information and will run workshops and conferences and distribute a newsletter.

While the educational environments of the U.K. and the U.S. differ, and the curriculum that I advocate is more holistic than the one used in the U.K., there remains a great deal of British experience and material that will be helpful in this country. The chart on page 11, for example, from the "Design Dimension Educational Trust" compares traditional teaching and learning styles with those of design and technology education.

From the chart we see that design and technology education is pupil-centered, that it draws from the past, but looks to the future, that teacher and pupil roles are highly interactive, that it is inter-disciplinary and that it concerns the qualitative and aesthetic, as well as the quantitative, aspects of experience. A picture emerges of a dynamic learning process that engages the whole student intellectually, emotionally and physically.

This approach is consistent, I believe, with what Thomas Sobol, New York State's Commissioner of Education, says in his "New Compact For Learning." [2] In a recent talk at a Center for Educational Innovation forum, Sobol said:

> You can, and indeed must, regulate abuses out of the system, but you can't regulate excellence into it because excellence is a product of the energies, hearts and minds of the people who are actually doing the work, the kids themselves. The only way you

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[1] The Center for Design & Technology Education, 154 St. Nicholas Ave., Englewood, N.J. 07631. Tel. (201) 568-5528, fax (201) 568-9341. Michael J. Shannon, Director.

[2] Thomas Sobol and New York State Board of Regents, A New Compact For Learning, Oct. 2, 1990, available from the New York State Department of Education, Albany, N.Y.

> can engender excellence in the system, therefore, is to energize those hearts and minds and create a context of direction and support wherein their energies can be used to the best effect. We can't simply run the system from the top down emphasizing compliance with procedural prescription.

Sobol poses the problem that design and technology education solves. Design and technology is a method to energize the "whole child" and more. It is as well, a *"whole community"* method. Local business, religious and political people, school administrators, teachers, parents and students are all drawn into the learning process.

The reason for this is that community life is the foundation of the design and technology curriculum. Work at every grade level, primary through high school, is based on problems drawn from student, family and community living. A major design and technology objective is to have students think of their lives at school as part of daily living, and learning as part of what everyone does everyday -- at home, at school and at work. The design and technology education maxim is *vivendo discimus* -- "by living we learn."

The curriculum's "life-based" projects are like the trunk of the tree of school life, delivering the resources of the community to the various branches of the school and then to the individual students, who through their growth and work replenish the community. These projects link the school's varied constituents both "vertically" -- that is, community resources, administrators, teachers, parents and students and also "horizontally" -- that is, within the school, all the academic subjects, programs and extracurricular activities. In this way the boundaries of school blur, "extracurricular" becomes curricular as all aspects of student life merge into an extended, seamless learning experience.

The decay of social cohesion once supplied by family, church and state has thrust the burden of creating 21st century society onto education -- the last best hope for American regeneration. The design and technology model supports education's comprehensive role by providing individual/community interaction and mutual reinforcement -- learning and working together. The school becomes the heart of community renewal staying open evenings and Saturdays during the whole year. School projects are not dummy exercises. Real work is accomplished, real changes are implemented. Children and their parents, teachers and local business people design life in the community based on shared goals and values. Students learn to view themselves as "citizen-designers," people who can conceive of a future they want and then manage the technology for realizing it.

Administrators and parents are always rightly concerned that students meet state academic requirements. I can only say now that I am certain that projects can be designed that will present rigorous learning opportunities in every academic area and will, at the same time, respond to real community needs. This "life-based" learning process can provide whatever kinds of knowledge and experience that may be required in math and science, art and languages or social studies and history. For example, among hundreds of possibilities for teaching sixth grade math, one might be to analyze -- and then perhaps to redesign -- the school cafeteria's operation. Along with the intriguing study of "hamburger-based" math, students will benefit, as in every case of life-based learning, from design and technology's interdisciplinary context. Every problem is linked to other subjects through research, analysis and design of family, school and community life.

The objective of community-based learning is to make interesting and fun what formerly seemed tedious and irrelevant, concrete and understandable what was sometimes abstract and confusing, and rewarding what might have been defeating. Projects are structured to assure beginners' success and recognition. Growing competence fosters self-respect, confidence, motivation and learning. Additionally, and importantly, cooperative methods also serve to encourage math and science participation by girls and minority boys, segments of the student population that are currently underrepresented in these areas.

Classes or "meetings" will include conceptual work, i.e. research, writing, discussions, presentations and group problem-solving and also -- *importantly* -- hands-on work, the mind-to-hand translation of abstract concepts into concrete reality. The forms of these tangible productions will be not only in fabricated structures, but also in art, music, dance and athletics. Projects for every age in the school and community will exercise all dimensions of work and learning -- rational, physical and affective. The celebration of community renewal will be inclusive.

Having focussed on the educational advantages of design and technology's community-based agenda, I want now to stress its socioeconomic benefits. Design and technology education makes plain the direct relation of education to life in the community i.e., of school achievement to life achievement. Design and technology education is founded on the conviction that a child-centered learning environment that builds young people's confidence with real successes and that enfolds them in communal solidarity, trust and care, will encourage humane and productive behavior.

Today, when the historical cycle of reform is once again making education the focus of public and political scrutiny, there are many alternative models being advanced. While excellent programs are available, there are none, I believe, that are as well-qualified as design and technology education *to serve the whole needs of communities -- educational and socioeconomic*. Educational and socioeconomic problems are inextricably linked. Their solution must be as well. Design and technology education's unique integration of powerful ideas -- creative vision, knowledge and action -- addresses community life humanely and compellingly, making it an extraordinary catalyst for community renewal.

The traditional concept of school has worn out; it doesn't work anymore. But we can't blame schools for the way things are nor can we use schools to fix our communities. Schools mirror society, they don't create it. But creating is the job that now needs doing. We need to design a new society with a new communitarian and pluralistic ethos.

What exactly will the new ethos be? We can't know beforehand. It will emerge from the process of learning and designing together. If we frame the problem this way, it is clear who has to do the work. It can't be any single institution or government service -- school, police, welfare. Designing society can only be done by society. And similarly, "designing people," that is, educating children, can only be done by the children themselves. People must be wholly invested in their own design.

In her lecture "Science Education: For Whom and for What?"[1] Margaret L.A. MacVicar of M.I.T. said recently, "In moving forward, we must remember that for almost everyone, *it is the need to have personal influence on, and personal control of, his/her own destiny that is fundamental and compelling*." This is the promise of design in education. By building informed *and active* communities, design and technology education -- community-based learning -- fulfills our compelling need to design our futures.

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[1] Margaret L.A. MacVicar, Dean for Undergraduate Education, Professor of Physical Science and Education, M.I.T., The Hull Lecture, Worcester Polytechnic Institute, September 28, 1989

TRADITIONAL TEACHING & LEARNING STYLES & STRATEGIES	DESIGN & TECHNOLOGICAL CAPABILITY: TEACHING STYLES & STRATEGIES	DESIGN & TECHNOLOGICAL CAPABILITY: PUPIL LEARNING STYLES & STRATEGIES
Teacher's role is to know the answers and to transmit this knowledge to the pupil.	Teacher cannot know all the answers: there is no "right/wrong" situation in designing. Teacher, therefore, must work with the pupil as a colleague and team member.	Pupil develops confidence in ability to explore, experiment, present ideas and possibilities and to state opinions. Knowing how to study is as important as knowing what to study. Team work in development and task identification important.
Subject matter is decided for the pupil by the teacher.	Content of design activity determined by the pupil in discussion with teacher having regard to own needs and to those of society at large in a range of contexts.	Pupil develops an understanding of needs & how they differ from wants. Pupil identifies area for study.
Concept of knowledge is focussed on the past, has to do with what exists and is already known.	Work is focussed on the future: what we might be able to do. But it also draws from the past: what our experience tells us may happen. Two key questions must always be considered. How did it come to be like that? What might it be like in the future?	Pupil develops skills of speculation and imaging and develops fluent approach to making ideas visible with simulations and models.
Pupil's role frequently (but not always) passive.	Pupil's role always active and interactive. Personal and social qualities associated with team work important.	Pupil always involved in trying out ideas. "What if?" is the key question. Needs to be involved in debate, reconciliation and compromise throughout all stages.
Nature of knowledge frequently (but not always) emphasizes specialization and existing subject barriers.	Nature of work makes interdisciplinary experiences necessary and inevitable.	Pupil draws on range of "subjects" study methods and techniques. Also relates knowledge and techniques to exploring new forms and possibilities.
Except in art, drama, music, shop, home economics and English, little consideration given to the qualitative and aesthetic aspects of experience.	Qualitative and quantitative experiences are of equal weight: aesthetic considerations seen as an essential aspect of design and technological capability.	What have I got to say and how am I going to say it? Pupil progressively masters the balance between quantitative and ultilitarian and qualitative and expressive demands.

Chart based on material from the Design Dimension Educational Trust.